



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/014,806	12/14/2001	Jean Guy Chavin	08887821US	1646

7590 11/04/2004

Gowling Lafleur Henderson LLP
Suite 2600
160 Elgin Street
Ottawa, ON K1P 1C3
CANADA

EXAMINER

PAYNE, DAVID C

ART UNIT	PAPER NUMBER
----------	--------------

2633

DATE MAILED: 11/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/014,806

Applicant(s)

CHAVIN, JEAN GUY

Examiner

David C. Payne

Art Unit

2633

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 December 2001.
2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-6 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 14 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 8/2/2002.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
3. Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Medard et al. US 6,603,112 B1 (Medard) in view of Murthy et al. US 6,545,982 B1 (Murthy) and Ames et al. US 2003/0002108 A1 (Ames) and Devon US 5,546,211 (Devon).

Re claim 1,

Medard disclosed

A signal monitoring and integrity checking system (*Figure 1, col. 7 lines 19-30*) for use in optical cross-connects (*e.g., switch in Table 1 col. 2 lines 22-45*) comprising the following elements: at least one interconnect (*consider a disclosed element as a switch from Table 1*

located at 14a and 14n in Figure 1) to connect an incoming link (12a of Figure 1) to an interconnecting link (12n of Figure 1);

Although Medard disclosed a monitoring system, he does not disclose an at least one multi-cast means to multi-cast the input of said at least one interconnect to at least one monitor port on said at least one interconnect; and at least one performance monitor means, one connected to each said at least one monitor port such that said at least one performance monitor means can detect the line signaling rate, protocol, and performance characteristics of any data carried thereon.

Murthy disclosed a at least one multi-cast means (multi-port bridge *Figure 1*) to multi-cast (*e.g. col. 18 lines 25-30, and col. 20 lines 35-40*) the input (*e.g., Port 0*) of said at least one interconnect (multi-port bridge *Figure 1*) to at least one monitor port (*Port 4*) on said at least one interconnect and at least one performance monitor means (*9 of Figure 1*). While there can exist subtle differences between a bridge and a switch, these differences are of no consequence in the context of the applicant's invention to monitoring an input port, since both bridges and switches function to interconnect lines of communication on their given ports. Therefore, it would have been obvious to one of ordinary skill in the art the time of invention to use the Murthy bridge and monitor in the Medard invention. One is motivated as such since Medard's invention is drawn to monitoring the input and outputs of optical devices thru taps and Murthy is drawn to monitoring the output of a device thru multicasting and thereby allow a network manager to diagnose, locate problems, evaluate performance, and determine appropriate adjustment to network parameters on particular input (*see Murthy*

Art Unit: 2633

col. 18, lines 17-21).

Ames disclosed an optical receiver capable of detecting a line-signaling rate on a transmission line (*140 of Figure 1*). It would have been obvious to one of ordinary skill in the art at the time of transmission to use the Ames' line rate detection mechanism in the Medard system. One is motivated as such so as to eliminate external control signals or complicated clock recovery schemes as disclosed by, *see Ames page 1, ¶ 0007*. Furthermore, Ames disclosed that a power savings may result in components by allowing the receiver circuitry to adjust to the bandwidth of the transmission, *see Ames page 3, ¶ 0026*.

Devon disclosed an optical receiver capable of sensing a transmitted protocol (*e.g., col. 2, lines 50-55*). It would have been obvious to one of ordinary skill in the art at the time of invention to use a protocol detection unit in the Medard system. One is motivated as such so as to accommodate more than one type of protocol transmission at the receiver and thereby accommodate a much greater set of communication devices. While it is noted that the Devon multi-protocol receiver is used in a wireless optical network, the protocol detection mechanism is applicable to the applicant's invention since the applicant did not specify the critical nature of any type of protocol to his invention.

Re claim 2,

the modified invention of Medard, Murthy, Ames and Devon as discussed

Art Unit: 2633

above disclosed a system further comprising: at least a second interconnect (*see Medard, 14n of Figure 1*) ; at least a second multi-cast means (*using a second Murthy multi-port bridge and monitor, see discussion of claim 1*) ; at least a second performance monitor means (*see Murthy monitor 9 of Figure 1, see discussion of claim 1*); and at least one comparison means (*Network Management System, Medard 32 of Figure 1*) to compare the outputs from said at least one performance monitoring means (*monitor of 1st bridge in 14a*) and said at least a second performance monitoring means (*monitor of 2nd bridge in 14n*) such that said comparison means can detect differences in measures as error rate (*see e.g., Medard col. 10, lines 37-45*). Note, there are two comparison means in Medard, the 1st (*20a of Figure 1*) which compares inputs and outputs of a single device and a second the Network Management system (*32 of Figure 1*) which makes decisions across devices (*see Medard discussion as to the purpose of an NMS col. 3 lines 62-67 and col. 4 lines 1-10*).

4. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Medard et al. US 6,603,112 B1 (Medard) in view of Murthy et al. US 6,545,982 B1 (Murthy) and Ames et al. US 2003/0002108 A1 (Ames) and Devon US 5,546,211 (Devon) as applied to claim 2 above, and in further view of Fatehi et al. US 6,185,021 B1 (Fatehi).

Re claims 3 and 4,

the modified invention of Medard, Murthy, Ames and Devon as discussed with respect to claim 2 above, does not disclose wherein said comparison means is part of an

Operation, Administration, Maintenance and Provisioning sub-system.

Fatehi disclosed a system of monitoring a switching system that is connected to a Operation, Administration, Maintenance and Provisioning (OAM&P) system (*see Fatehi col. 4, lines 20-26*). It would have been obvious to one of ordinary skill in the art at the time of invention include the comparison and monitoring function of the modified system within a larger OAM&P [sub]-system. One is motivated as such so as to have the ability to configure and monitor the network. Furthermore, in many instances one skilled in the art would consider the Network Management System (*see Medard 32 of Figure 1*) to encompass OAM&P functions.

5. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Medard et al. US 6,603,112 B1 (Medard) in view of Murthy et al. US 6,545,982 B1 (Murthy) and Fatehi et al. US 6,185,021 B1 (Fatehi).

Re claim 5,

Medard disclosed

A method for signal monitoring and integrity checking (*Figure 1, col. 7 lines 19-30*) in an optical system. Medard does not disclose the following steps:

1) multi-casting the data at an input port of an interconnect to a connecting path and a snooping path; 2) multi-casting the data at an input port of at least a second interconnect to at least a second connecting path and at least a second snooping path; 3) monitoring said

snooping path connected to said multi-cast data with a Performance Monitor; 4) monitoring said at least a second snooping path connected to said at least a second multi-cast data with at least a second Performance Monitor; 5) comparing the output of said Performance Monitor in step 3 with the output of said at least a second Performance Monitor in step 4; and 6) signaling said results of the comparing step to an Operation, Administration, Maintenance and Provisioning sub-system.

Murthy disclosed

1) multi-casting the data at an input port (*e.g., Port 0*) of an interconnect (multi-port bridge *Figure 1*) to a connecting path (*e.g., Port 5*) and a snooping path (*Port 4*);

3) monitoring said snooping path connected to said multi-cast data with a Performance Monitor (*9 of Figure 1*); It would have been obvious to one of ordinary skill in the art at the time of invention to connect the Murthy multi-cast bridge in the Medard system by duplicating each bridge in the position of the first optical element (*14a of Figure 1 – Medard*) and subsequent optical element (*14n of Figure 1 – Medard*) and thereby produce the steps of

2) multi-casting the data at an input port of at least a second interconnect (*14n of Figure 1 – Medard*) to at least a second connecting path (*Port 5 of second bridge positioned at 14n of Figure 1-Medard*); and at least a second snooping path (*Port 4 of second bridge positioned at 14n of Figure 1-Medard*);

4) monitoring said at least a second snooping path connected to said at least a second multi-cast data with at least a second Performance Monitor (*9 of second bridge Figure 1 Murthy*);

5) comparing the output of said Performance Monitor in step 3 with the output of said at least

Art Unit: 2633

a second Performance Monitor in step 4 (32 of *Figure 1 Medard*). One is motivated as such since Medard's invention is drawn to monitoring the input and outputs of optical devices thru taps and Murthy is drawn to monitoring the output of a device thru multicasting and thereby allow a network manager to diagnose, locate problems, evaluate performance, and determine appropriate adjustment to network parameters on particular input (*see Murthy col. 18, lines 17-21*).

Fatehi disclosed a system of monitoring a switching system that is connected to an Operation, Administration, Maintenance and Provisioning (OAM&P) system (*see Fatehi col. 4, lines 20-26*). It would have been obvious to one of ordinary skill in the art at the time of invention to signal the results of the comparison step 6 to a larger OAM&P [sub]-system. One is motivated as such so as to have the ability to configure and monitor the network and manage the overall network.

6. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Medard et al. US 6,603,112 B1 (Medard) in view of Murthy et al. US 6,545,982 B1 (Murthy) and Fatehi et al. US 6,185,021 B1 (Fatehi) as applied to claim 5 above, and in further view of Goodman et al. US 6,636,529 B1 (Goodman) and Devon US 5,546,211 (Devon).

The applied reference has a common Assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a

Art Unit: 2633

showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). For applications filed on or after November 29, 1999, this rejection might also be overcome by showing that the subject matter of the reference and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person. See MPEP § 706.02(l)(1) and § 706.02(l)(2).

Re claim 6,

the modified invention of Medard, Murthy and Fatehi as discussed with respect to claim 5 above, does not disclose wherein the monitoring steps each comprise the following steps: 1) detecting the line code of a connection; and 2) detecting the protocol of said connection.

Goodman disclosed line code detection in an optical receiver with line code detection (330 of Figure 3). It would have been obvious to one of ordinary skill in the art at the time of invention to use line-coding detection in the modified invention of Medard, Murthy and Fatehi. One is motivated as such since line-code detection enables a greater degree of error

detection and thus performance monitoring, compared to a bit-based interface. Furthermore synchronization can be simpler since line codes for padding can be added or delete more easily, using lower specification hardware, than is needed for adding or subtracting bits, *see Goodman discussion col. 3 lines 1-5 and 10-17.*

Devon disclosed an optical receiver capable of sensing a transmitted protocol (*e.g., col. 2, lines 50-55*). It would have been obvious to one of ordinary skill in the art at the time of invention to use a protocol detection unit in the modified invention of Medard, Murthy and Fatehi. One is motivated as such so as to accommodate more than one type of protocol transmission at the receiver and thereby accommodate a much greater set of communication devices. While it is noted that the Devon multi-protocol receiver is used in a wireless optical network, the protocol detection mechanism is applicable to the applicant's invention since the applicant did not specify the critical nature of any type of protocol to his invention.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David C. Payne whose telephone number is (571) 272-3024. The examiner can normally be reached on M-F, 7a-4p.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571) 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2633

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dcp

A handwritten signature in cursive script, appearing to read "David C. Payne".

David C. Payne
Patent Examiner
AU 2633